

In The Claims:

Claim 1 (Canceled).

Claim 2 (Currently Amended) [The] A method of [claim 1] assembling a discharge light source comprising:

providing a base made of a single material to form an end of said discharge lamp source;

positioning and passing [said] a first lead through said base wherein said base forms a first airtight seal around said first lead;

positioning and passing [said] a second lead through said base wherein said base forms a second airtight seal around said second lead;

attaching a first electrode to said first lead;

attaching a second electrode to said second lead;

positioning a bulb wherein said base is encircled by an open end of said bulb and wherein said bulb and said base enclose said first and said second electrodes;

filling said bulb with a gas; and

attaching said base to said bulb wherein said bulb forms a third airtight seal around said base.

Claim 3 (Original) The method of claim 2 wherein said base is made of glass.

Claim 4 (Original) The method of claim 2 wherein said bulb is made of glass.

Claim 5 (Original) The method of claim 2 wherein the thermal expansion coefficient of said base is greater than $1.0 \cdot 10^{-6}/K$.

Claim 6 (Original) The method of claim 2 wherein the thermal expansion coefficient of said base is approximately equal to the thermal expansion coefficient of said bulb.

Claim 7 (Original) The method of claim 2 wherein the thermal expansion coefficients of said first lead and said second lead are approximately equal to the thermal expansion coefficient of said base.

Claim 8 (Original) The method of claim 2 wherein the power of said discharge light source is less than 50 watts.

Claim 9 (Original) The method of claim 2 wherein said first and second electrodes are made of tungsten.

Claim 10 (Original) The method of claim 2 wherein said step of attaching said first electrode to said first lead comprises:

spot welding said first electrode to said first lead.

Claim 11 (Original) The method of claim 10 wherein said step of spot welding comprises:

positioning a weld agent between said first electrode and said first lead; and
melting said weld agent.

Claim 12 (Original) The method of claim 11 wherein the melting point of said weld agent is higher than an operating temperature of said discharge light source and lower than the melting points of said first lead and said first electrode.

Claim 13 (Original) The method of claim 11 wherein said first electrode is made of tungsten and said first lead is made of molybdenum.

Claim 14 (Original) The method of claim 13 wherein said weld agent is made of platinum.

Claim 15 (Original) The method of claim 13 wherein said weld agent is made of tantalum.

Claims 16-19 (Canceled).

Claim 20 (Original) The method of claim 2 wherein a gap between said first electrode and said second electrode is parallel to said first and second leads.

Claim 21 (Original) The method of claim 2 wherein a gap between said first electrode and said second electrode is perpendicular to said first and second leads.

Claim 22 (Original) The method of any one of claims 20 or 21 wherein the length of said gap is less than eighty percent of the inner diameter of said bulb.

Claim 23 (Original) The method of any one of claims 20 or 21 wherein the length of said gap is less than seventy-five percent of the inner length of said bulb.

Claim 24 (Original) The method of claim 2 further comprising:
positioning a brace wherein said brace attaches to said first lead between said first electrode and said base and wherein said brace attaches to said second lead between said second electrode and said base.

Claims 25-26 (Canceled).

Claim 27 (Original) The method of claim 2 wherein said gas is xenon.

Claim 28 (Original) The method of claim 2 wherein the pressure of said gas is greater than one bar.

Claim 29 (Original) The method of claim 2 wherein [the] a closed end of said bulb is a lens.

Claim 30 (Canceled).

Claim 31 (Currently Amended) [The] A discharge light source [of claim 30 further] comprising:

a base made of a single material wherein said base forms an end of said discharge light source and wherein [said] a first lead passes through said base wherein said base forms a first airtight seal around said first lead and wherein [said] a second lead passes through said base wherein said base forms a second airtight seal around said second lead;

a first electrode wherein said first electrode is attached to said first lead;

a second electrode wherein said second electrode is attached to said second lead;

a bulb wherein said base is encircled by an open end of said bulb and wherein said bulb and said base enclose said first and second electrodes;

a gas wherein said gas is enclosed by said base and said bulb; and

an attaching mechanism configured to attach said base to said bulb wherein said bulb forms a third airtight seal around said base.

Claim 32 (Original) The discharge light source of claim 31 wherein said base is made of glass.

Claim 33 (Original) The discharge light source of claim 31 wherein said bulb is made of glass.

Claim 34 (Original) The discharge light source of claim 31 wherein the thermal expansion coefficient of said base is approximately equal to the thermal expansion coefficient of said bulb.

Claim 35 (Original) The discharge light source of claim 31 wherein the thermal expansion coefficient of said base is greater than $1.0 \cdot 10^{-6}/K$.

Claim 36 (Original) The discharge light source of claim 31 wherein the thermal expansion coefficients of said first lead and said second lead are approximately equal to the thermal expansion coefficient of said base.

Claim 37 (Original) The discharge light source of claim 31 wherein the power of said discharge light source is less than 50 watts.

Claim 38 (Original) The discharge light source of claim 31 wherein said first and second electrodes are made of tungsten.

Claim 39 (Original) The discharge light source of claim 31 wherein said first electrode is spot welded to said first lead.

Claim 40 (Original) The discharge light source of claim 39 further comprising:

a weld agent positioned between said first electrode and said first lead wherein said weld agent is configured to hold said first electrode to said first lead after said weld agent is melted and allowed to cool.

Claim 41 (Original) The discharge light source of claim 40 wherein the melting point of said weld agent is higher than an operating temperature of said discharge light source and lower than the melting points of said first lead and said first electrode.

Claim 42 (Original) The discharge light source of claim 40 wherein said first electrode is made of tungsten and said first lead is made of molybdenum.

Claim 43 (Original) The discharge light source of claim 42 wherein said weld agent is made of platinum.

Claim 44 (Original) The discharge light source of claim 42 wherein said weld agent is made of tantalum.

Claims 45-48 (Canceled).

Claim 49 (Original) The discharge light source of claim 31 wherein a gap between said first electrode and said second electrode is parallel to said first and second leads.

Claim 50 (Original) The discharge light source of claim 31 wherein a gap between said first electrode and said second electrode is perpendicular to said first and second leads.

Claim 51 (Original) The discharge light source of any one of claims 49 or 50 wherein the length of said gap is less than eighty percent of the inner diameter of said bulb.

Claim 52 (Original) The discharge light source of any one of claims 49 or 50 wherein the length of said gap is less than seventy-five percent of the inner length of said bulb.

Claim 53 (Original) The discharge light source of claim 31 further comprising:
a brace configured to hold said first lead and said second lead in position wherein said brace attaches to said first lead between said first electrode and said base and wherein said brace attaches to said second lead between said second electrode and said base.

Claims 54-55 (Canceled).

Claim 56 (Original) The discharge light source of claim 31 wherein said gas is xenon.

Claim 57 (Original) The discharge light source of claim 31 wherein the pressure of said gas is greater than one bar.

Claim 58 (Original) The discharge light source of claim 31 wherein the closed end of said bulb is a lens.

RESPONSE

Claims 1-58 are pending in the application. Claims 1-58 have been rejected. Applicant has amended claims 2 and 31, and canceled claims 1, 16-19, 25-26, 30, 45-48, and 54-55 in the present application. Reconsideration and re-examination of pending claims is respectfully requested.

Drawings

Applicant has added a legend "Prior Art" to Figure 1.

Applicant has canceled claims 16-19 and 45-48, so the objection under 37 CFR 1.83(a) is moot.

Applicant has canceled claims 25, 26, 54, and 55 because they had a feature not shown in Figures 2, 4, 5, and 6, hence the drawings are now in compliance with the description and claims.

Claim Rejections based on 35 USC 102

The Examiner has rejected claims 1-4, 6, 7, 20, 21, 30-34, 36, 49, and 50 under 35 U.S.C. 102(b) as being anticipated by Balaschak et. al. (USPN 5,468,168).

Applicant has elected to delete claims 1, and 30, and amend claims 2 and 31 to independent form. Applicant respectfully disagrees that claims 2 and 31, as amended, anticipate Balaschak et. al. (Balaschak) and states:

The single ended embodiment of the discharge lamp in Balaschak (Fig. 14) comprises a base, but the base is not made of a single material. The base is made of at least two different materials (items 138 and 54) as seen by the different hashing symbols. The discharge lamp of the present invention has a base made of a single material which is

clearly depicted as item 210 in Figure 2, item 410 in Figure 4, item 510 in Figure 5, item 610 in Figure 6, or item 710 in Figure 7. Since Balaschak does not anticipate every aspect of claims 2 and 31, the rejection of independent claims 2 and 31 is moot. Since claims 3, 4, 6, 7, 20, 21, 32-34, 36, and 49-50 are dependent on a now allowable base claim (2 or 31), their rejection is moot as well.

Claim Rejections based on 35 USC 103

Examiner has rejected claims 5 and 35 under 35 U.S.C. 103 (a) as being unpatentable over Balaschak, in view of Ohdate (USPN 4,972,988). Applicant states that since claims 5 and 35 are dependent on a now allowable base claim 2 and 31 respectively, their rejection is moot.

Examiner has rejected claims 22, 23, 51, and 52 under 35 U.S.C. 103(a) as being unpatentable over Balaschak. Applicant states that since claims 22 and 23 are dependent on a now allowable base claim 2, and claims 51 and 52 dependent on a now allowable base claim 31, their rejection is moot.

Examiner has rejected claims 9, 10, 38, and 39 under 35 U.S.C. 103(a) as being unpatentable over Balaschak and further in view of JP 57143243 to Kumabe et. al. Applicant states that since claims 9 and 10 are dependent on a now allowable base claim 2, and claims 38 and 39 dependent on a now allowable base claim 31, their rejection is moot.

Examiner has rejected claims 11-15 and 40-44 under 35 U.S.C. 103(a) as being unpatentable over Balaschak and JP 57143243 to Kumabe et. al. and further in view of JP 06223783 to Matsushita Denki Sangyo KK. Applicant states that since claims 11-15 are

dependent on a now allowable base claim 2, and claims 40-44 dependent on a now allowable base claim 31, their rejection is moot.

Examiner has rejected claims 16, 19, 8, 27, 28, 45, 48, 37, 56, and 57 under 35 U.S.C. 103(a) as being unpatentable over Balaschak in view of Bruggemann et. al. (USPN 6,140,769). Applicant has elected to cancel claims 16, 19, 45, and 48. Applicant states that since claims 8, 27, and 28 are dependent on a now allowable base claim 2, and claims 37, 56, and 57 dependent on a now allowable base claim 31, their rejection is moot.

Examiner has rejected claims 16-19 and 45-49 under 35 U.S.C. 103(a) as being unpatentable over Balaschak in view of Chow (USPN 4,645,979). Applicant has canceled claims 16-19 and 45-49, so their rejection is moot.

Examiner has rejected claims 24, and 53 under 35 U.S.C. 103(a) as being unpatentable over Balaschak in view of Tokuhara et. al. (USPN 5,468,168). Applicant states that since claim 24 depends on a now allowable base claim 2, and claim 53 depends on a now allowable base claim 31, their rejection is moot.

Examiner has rejected claims 25, 54, 26, and 55 under 35 U.S.C. 103(a) as being unpatentable over Balaschak in view of Takeuti et. al. (USPN 6,211,616). Applicant has canceled claims 25, 26, 54, and 55, so their rejection is moot.

Examiner has rejected claims 29 and 58 under 35 U.S.C. 103(a) as being unpatentable over Balaschak in view of JP 2000231906 to Yano. Applicant states that since claim 29 depends on a now allowable base claim 2, and claim 58 depends on a now allowable base claim 31, their rejection is moot.

CONCLUSION

For at least the foregoing reasons, Applicant respectfully submits that pending claims 2-15, 20-24, 27-29, 31-44, 49-53, and 56-58 are patentably distinct from the prior art of record and in condition for allowance. Applicant therefore respectfully requests that pending claims 2-15, 20-24, 27-29, 31-44, 49-53, and 56-58 be allowed.

Respectfully submitted,

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